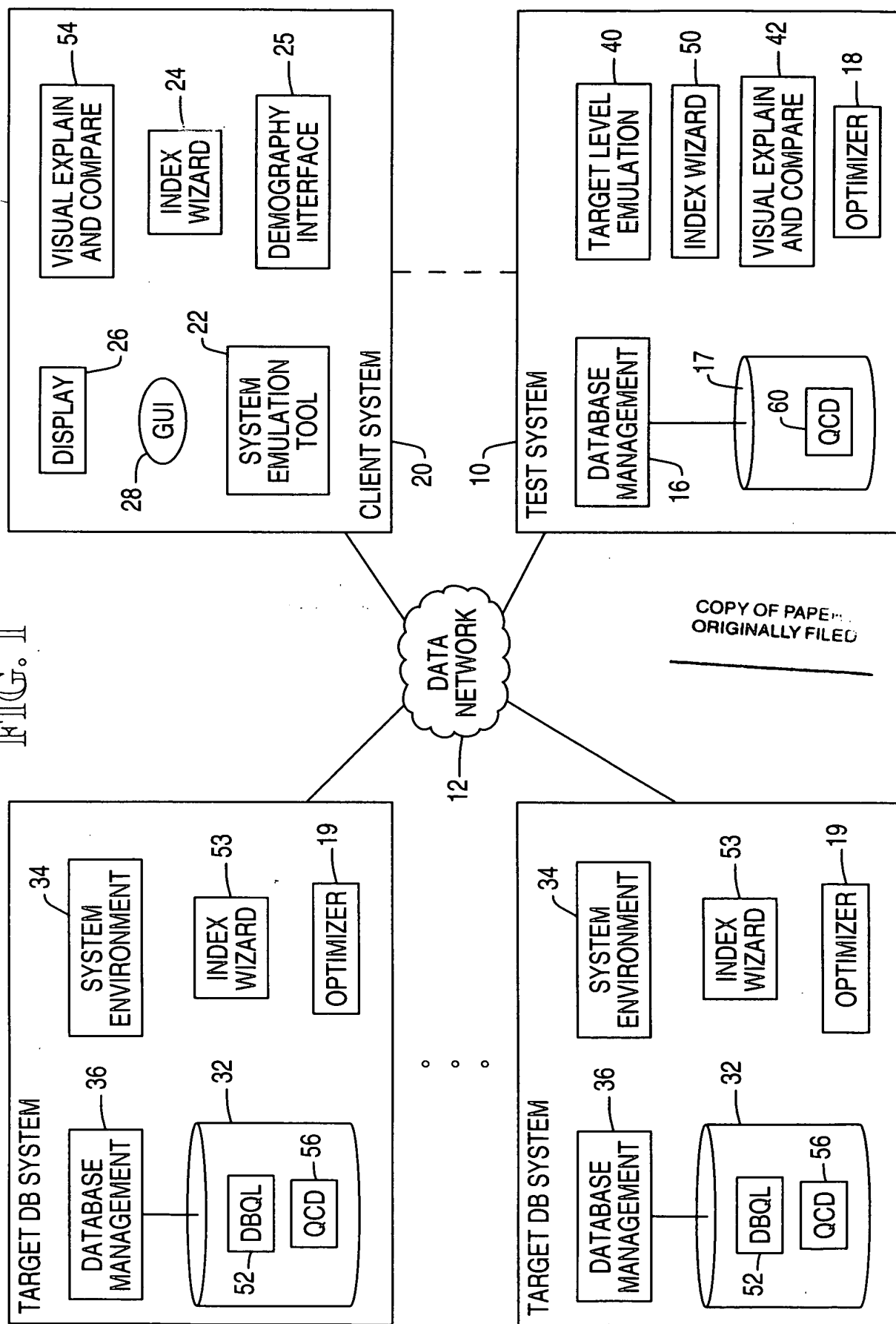


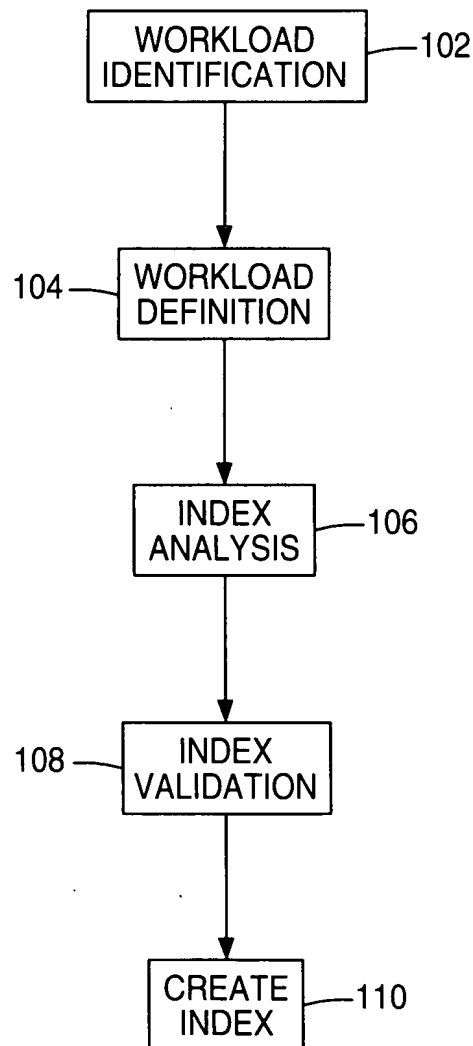
FIG. 1



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FIG. 2



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FIG. 3

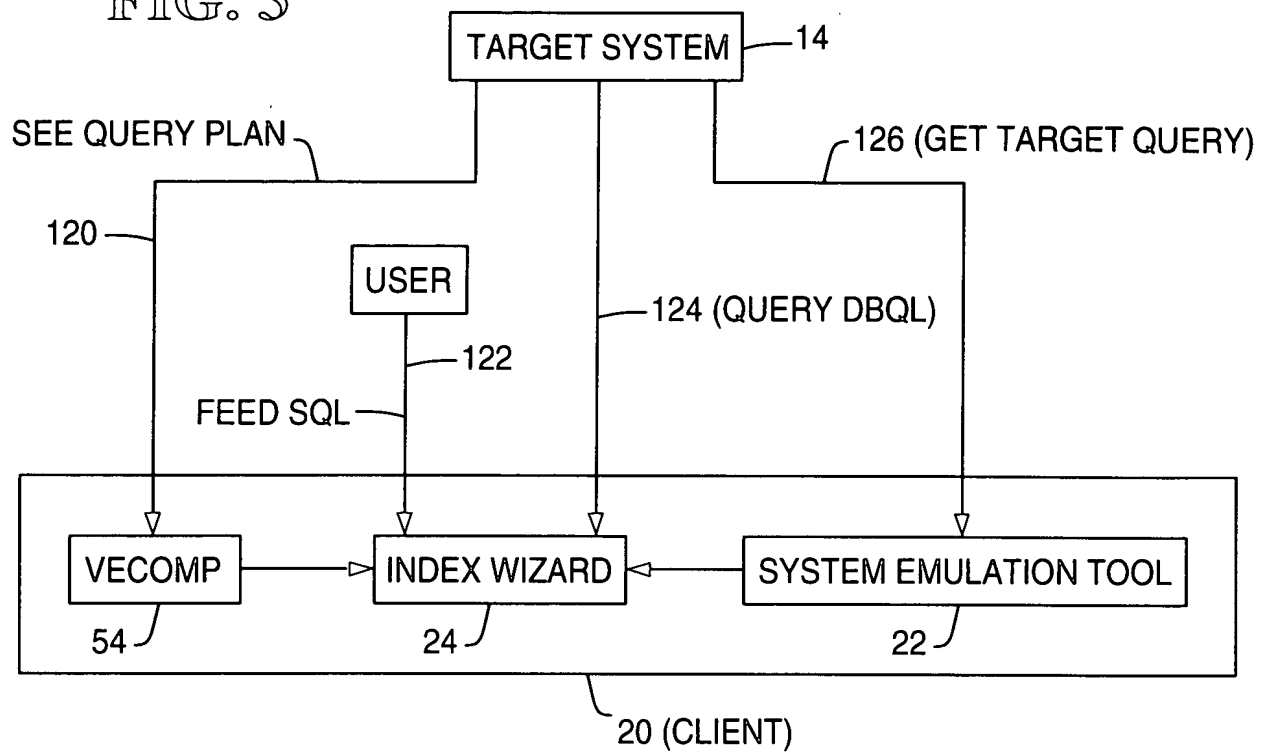
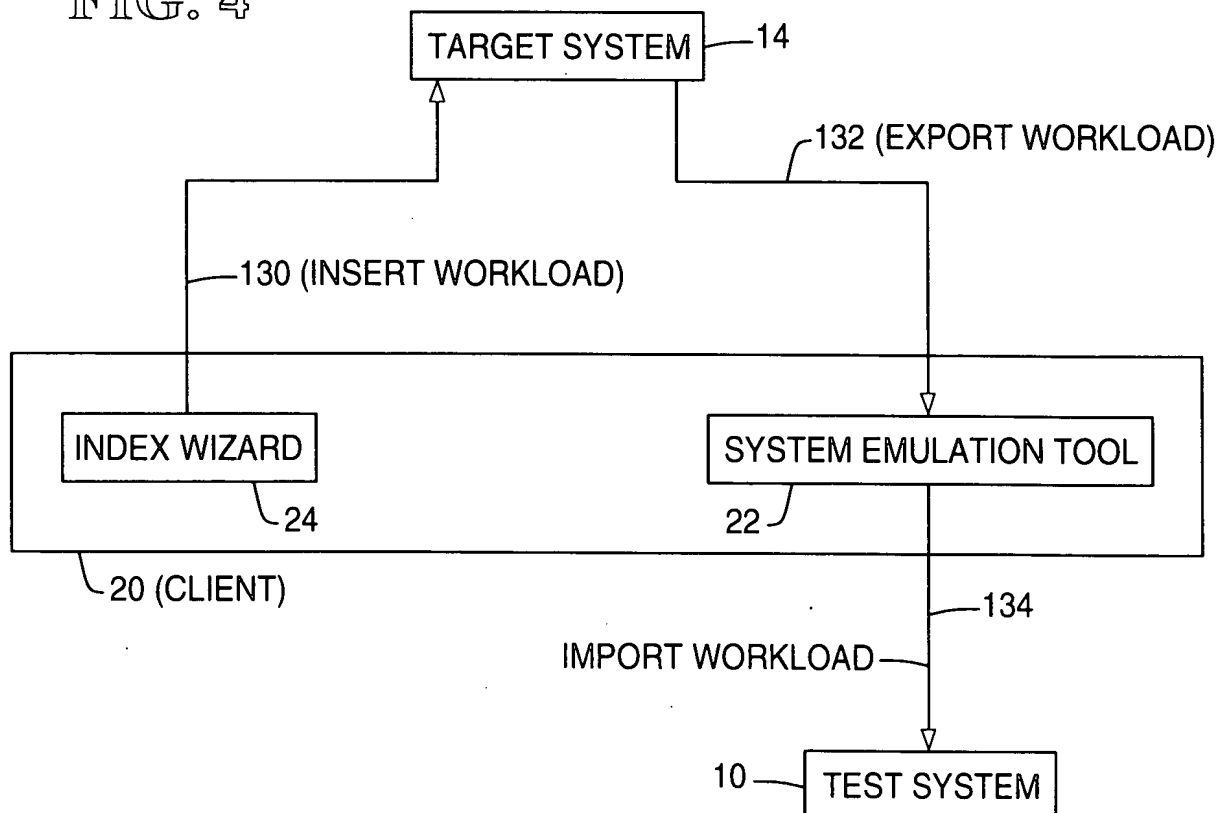
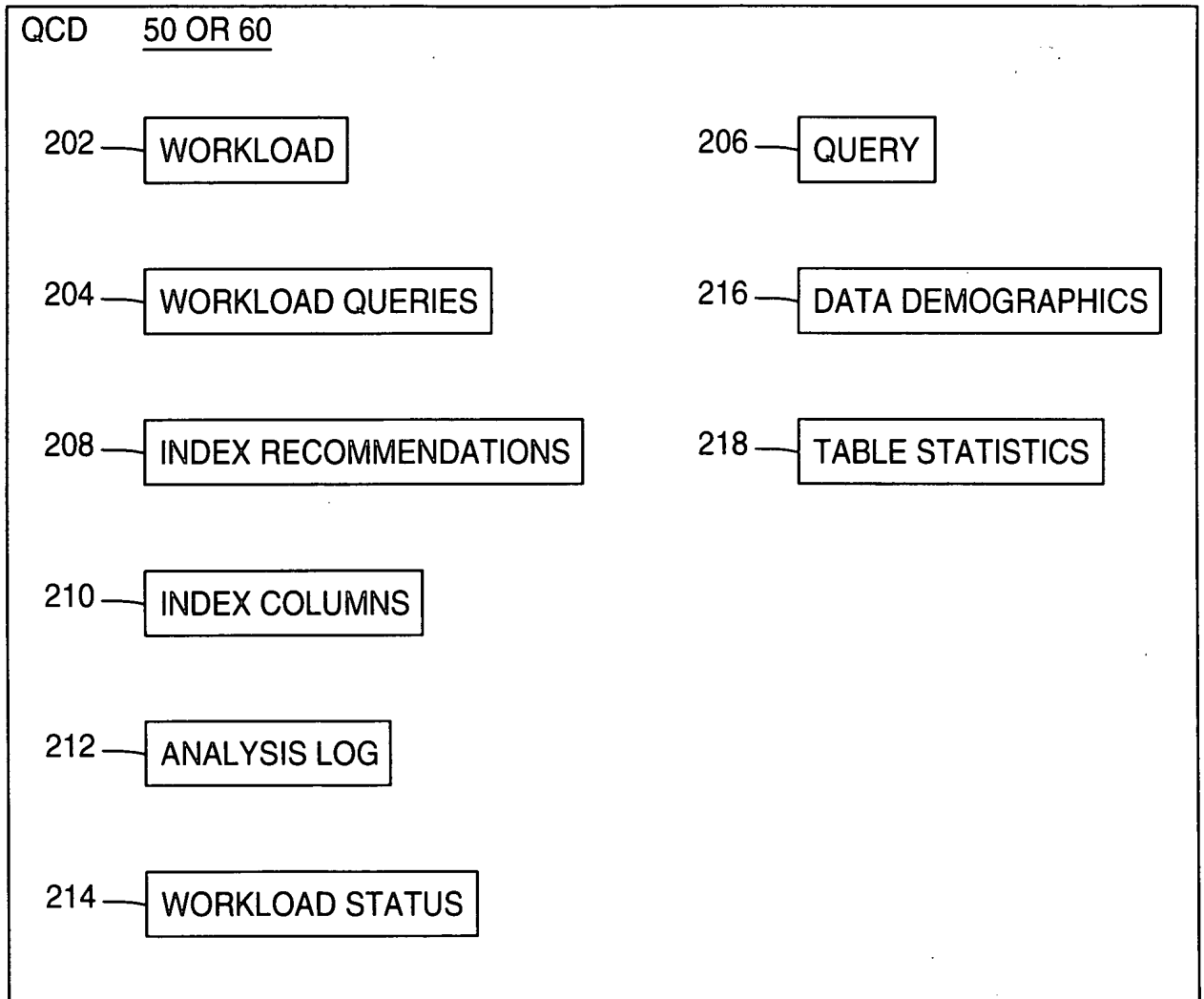


FIG. 4



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FIG. 5



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FIG. 6

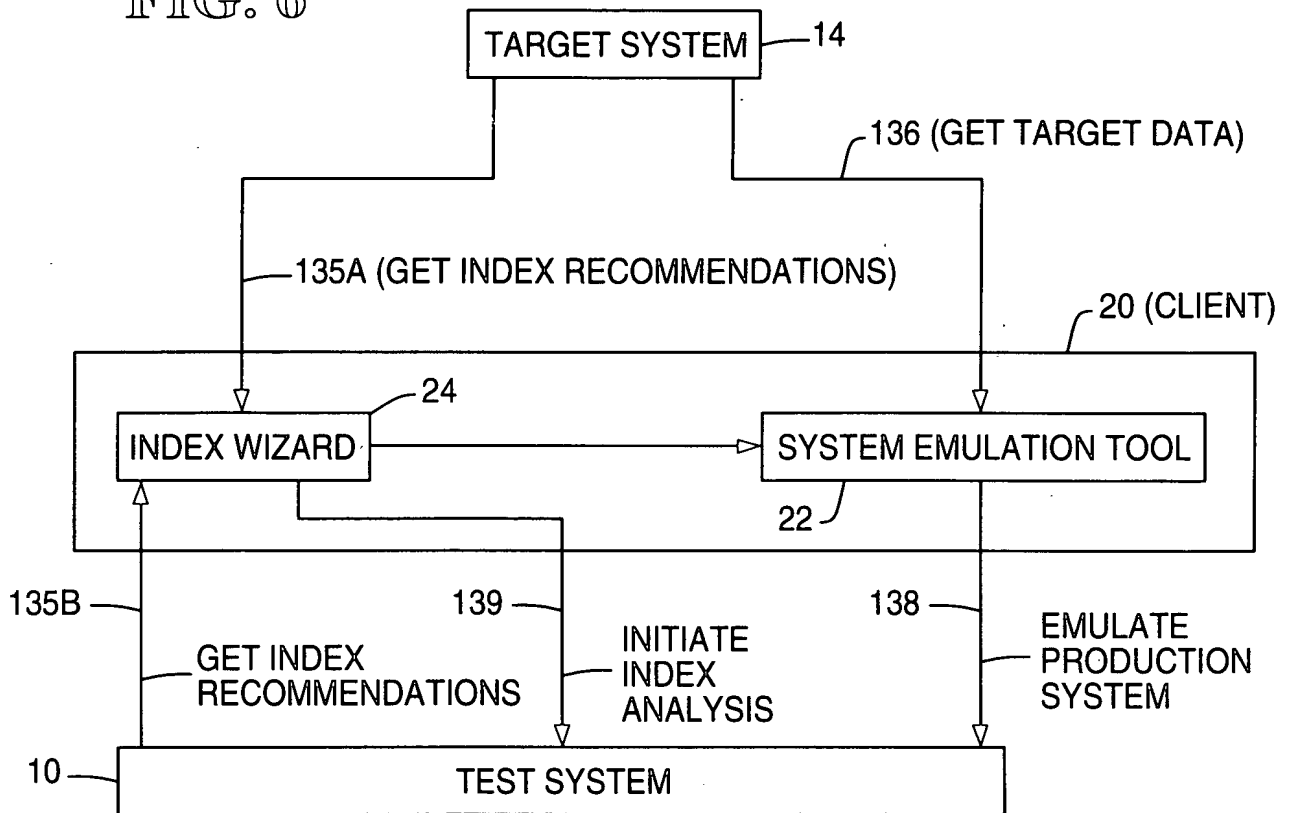
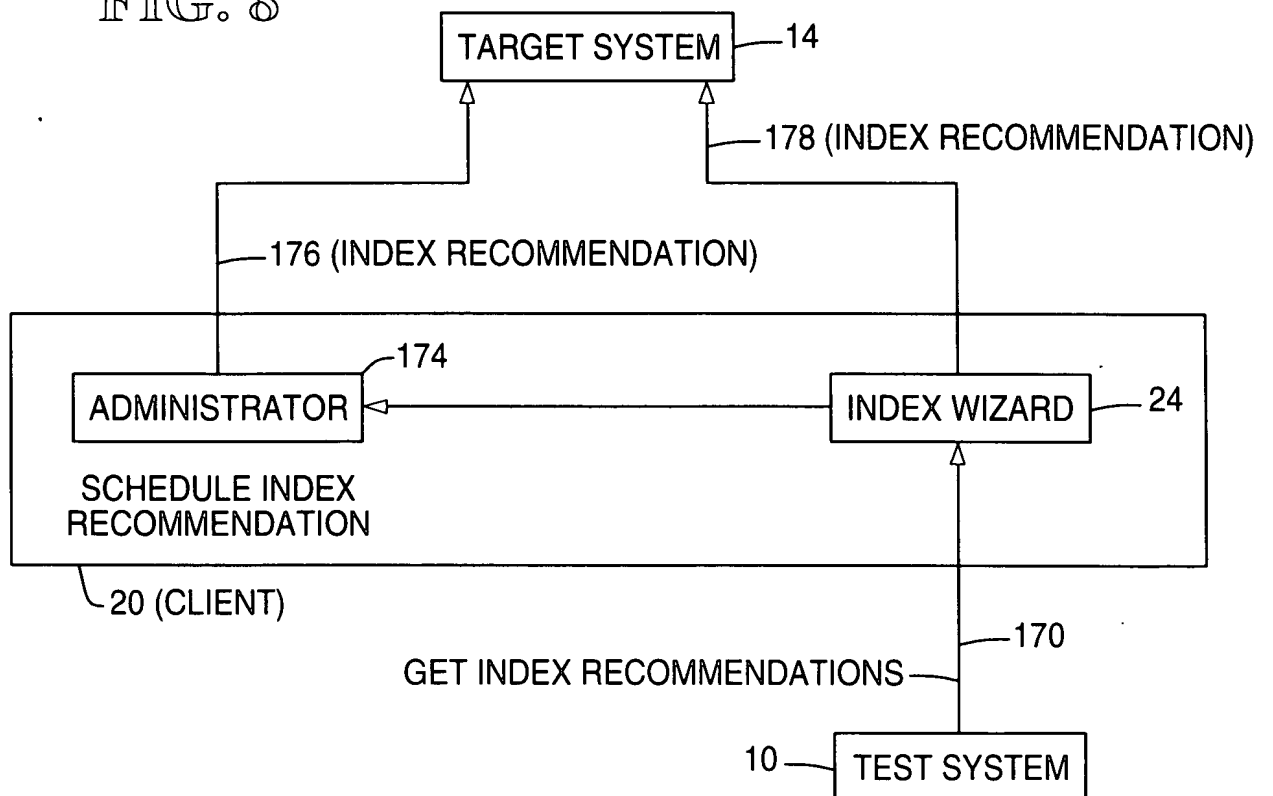


FIG. 8



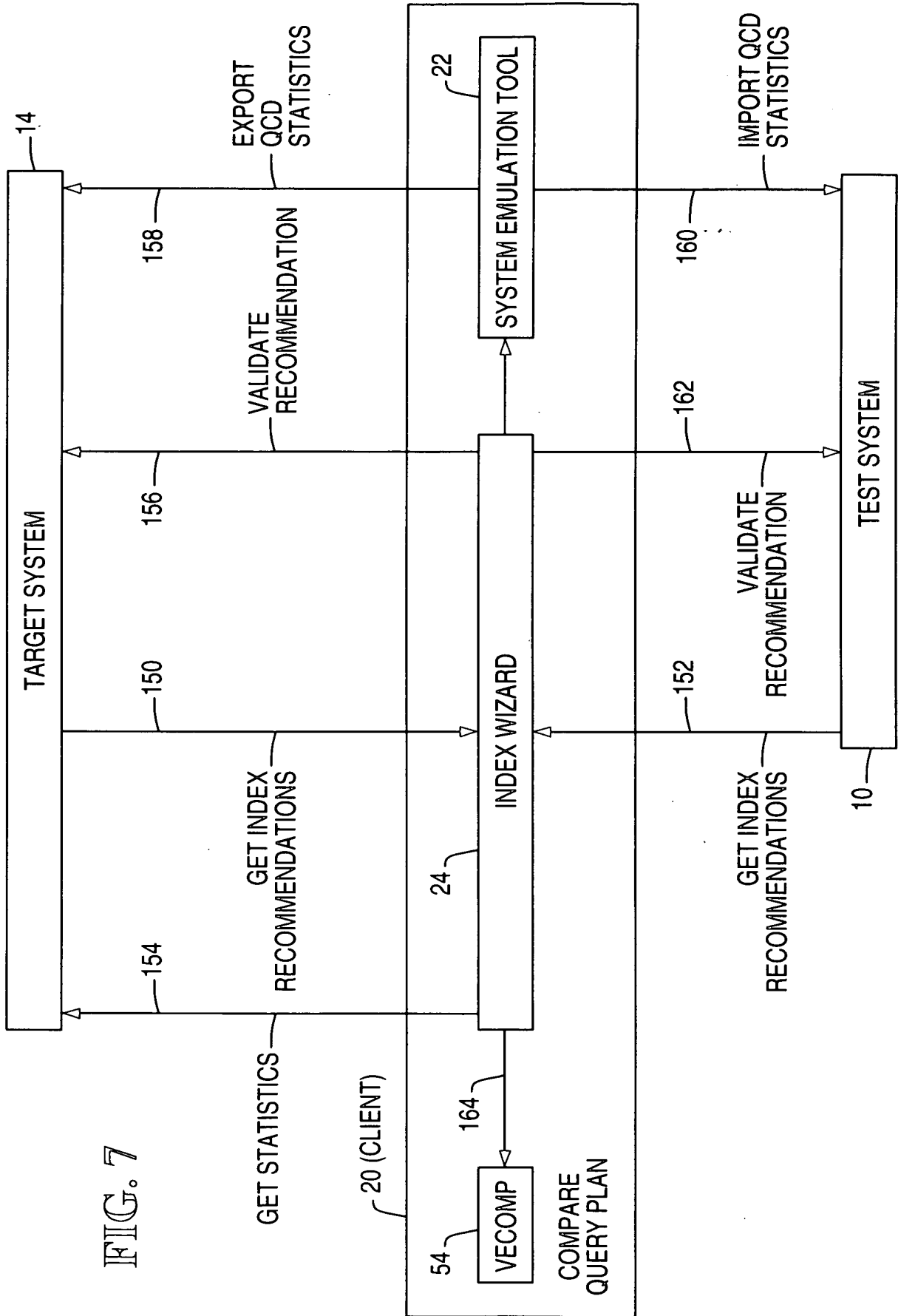


FIG. 9

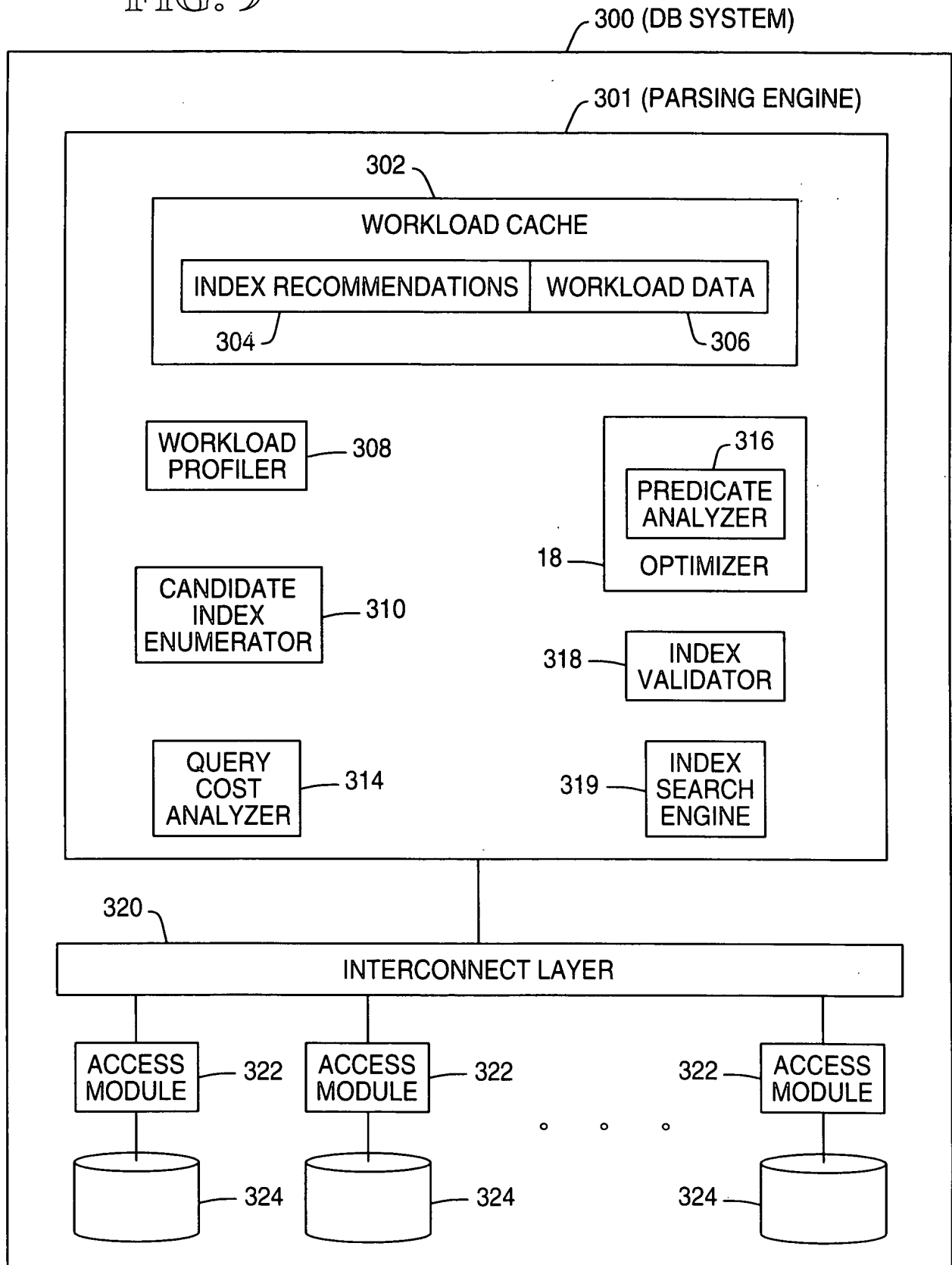
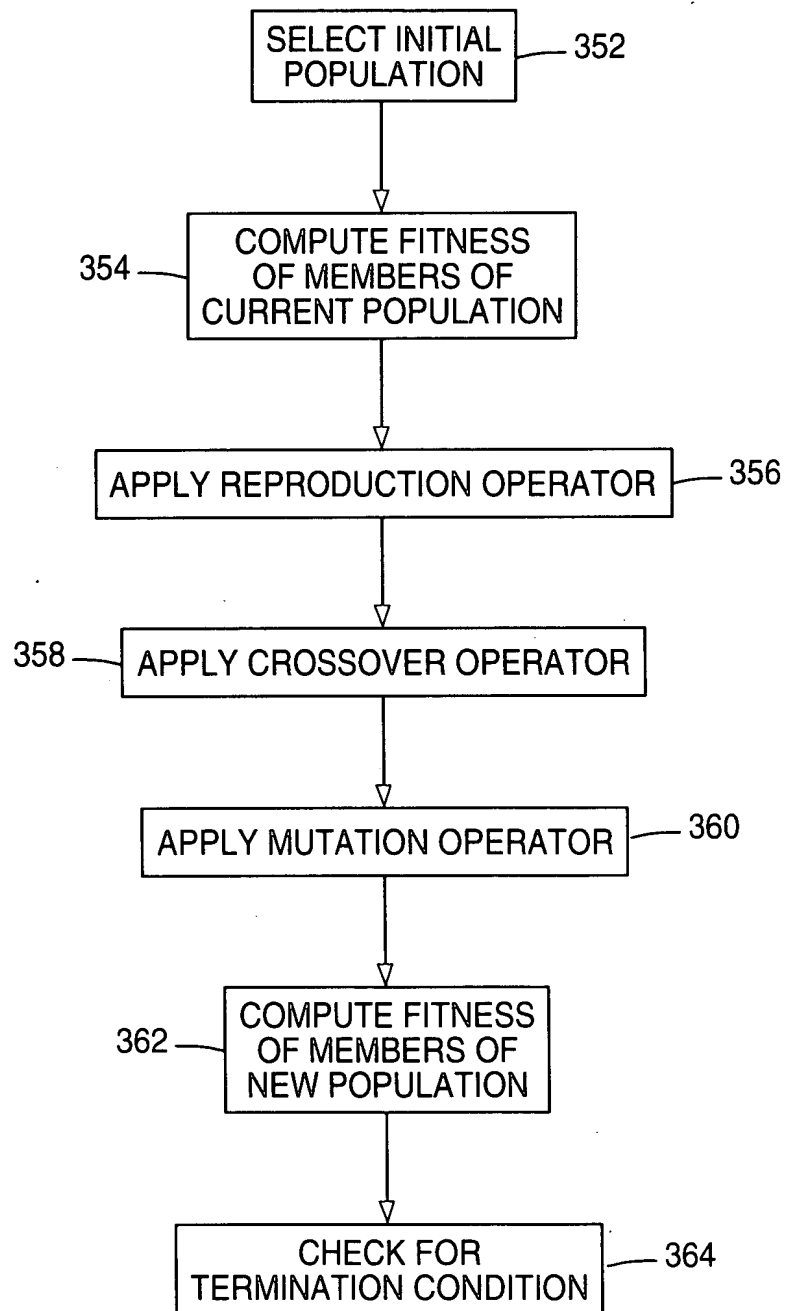


FIG. 10



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FIG. 11

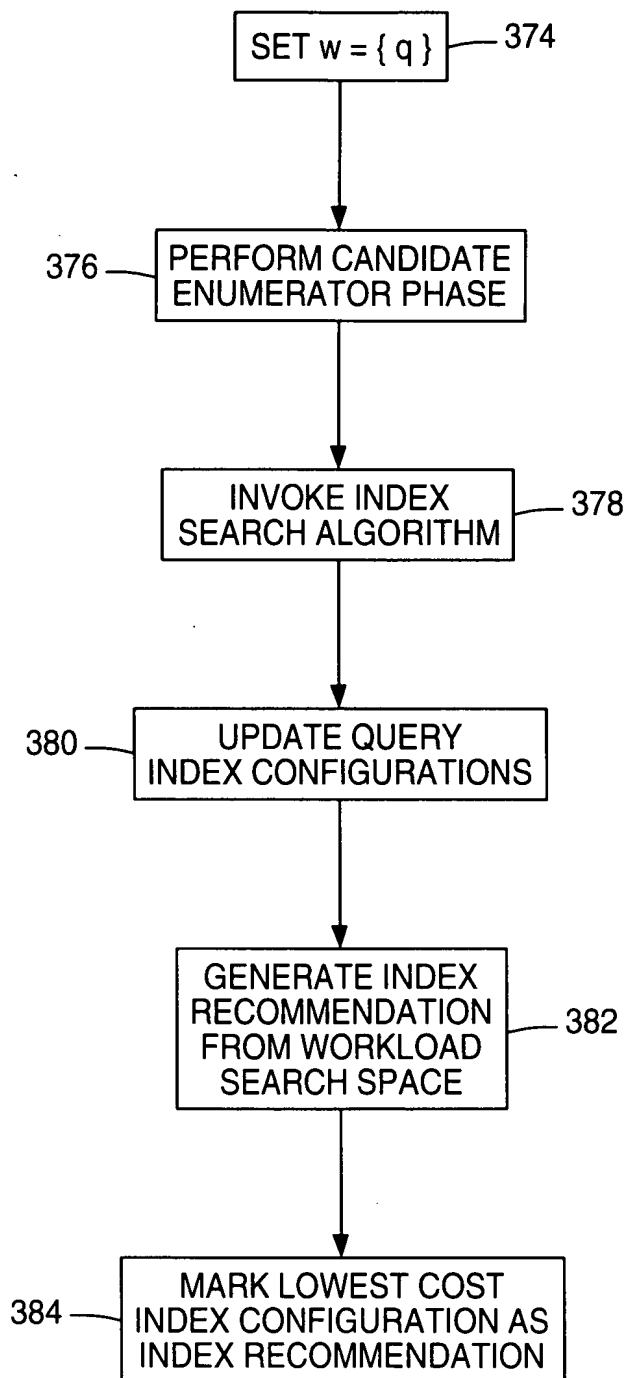
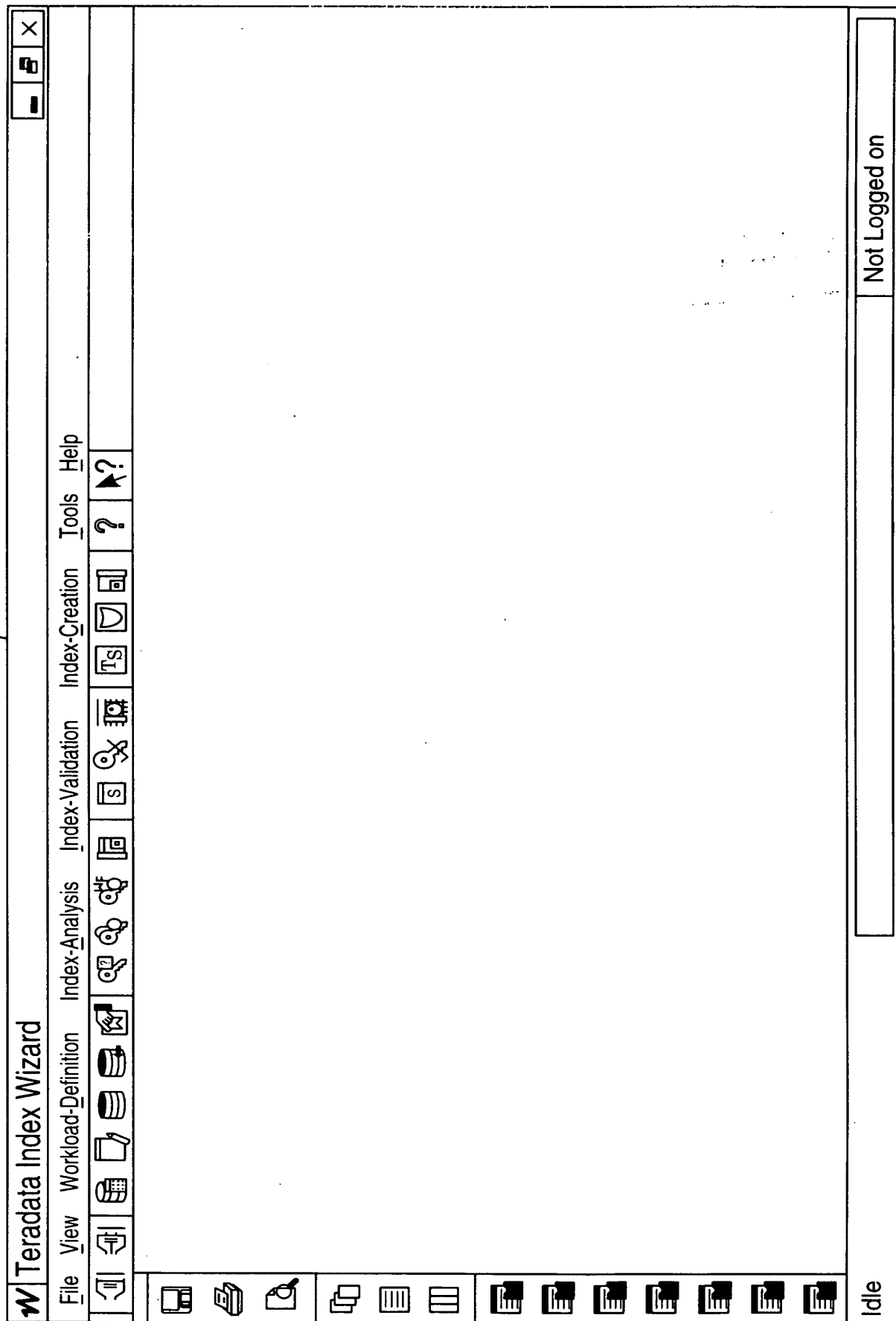


FIG. 12

400



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FIG. 13

400

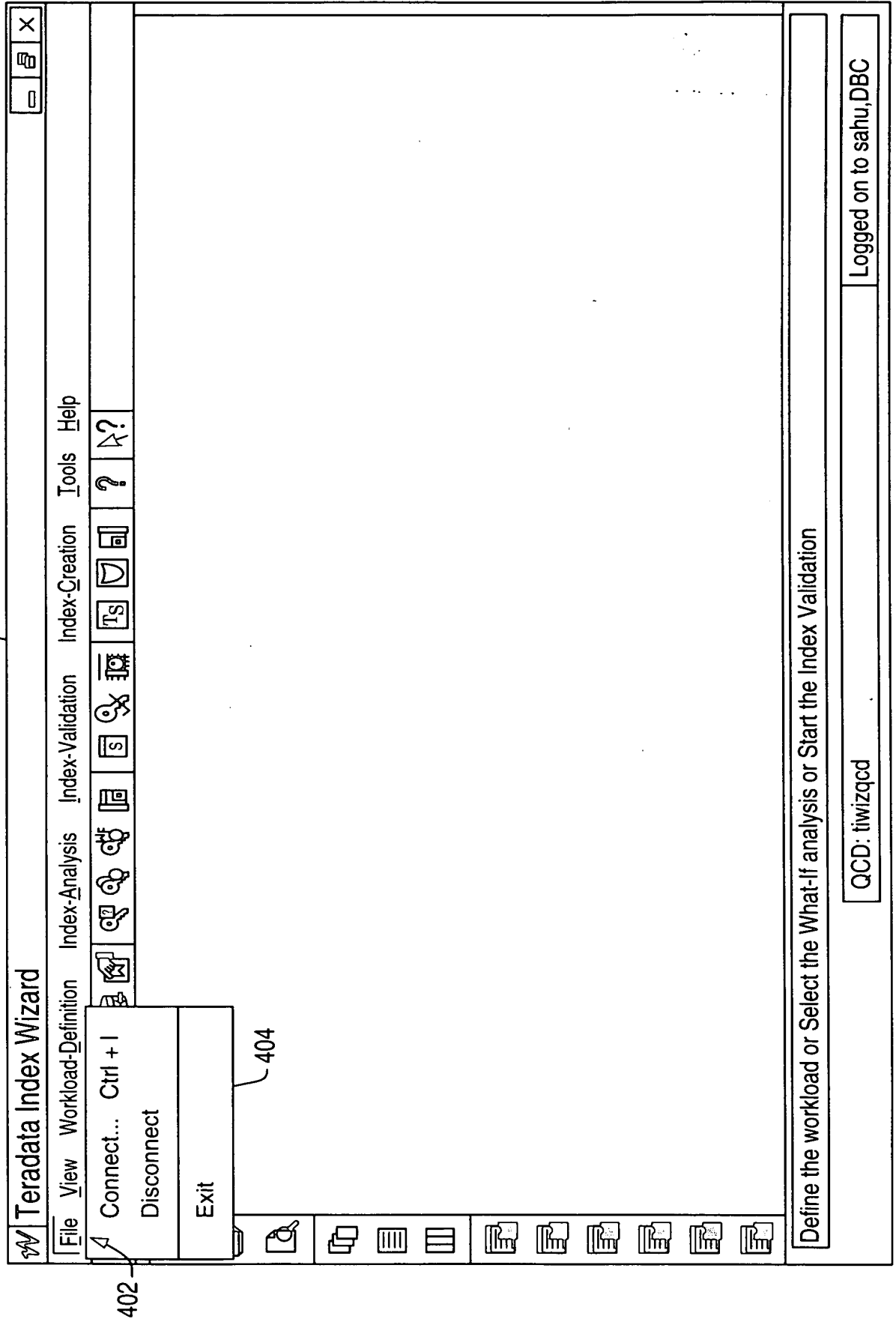


FIG. 14

400

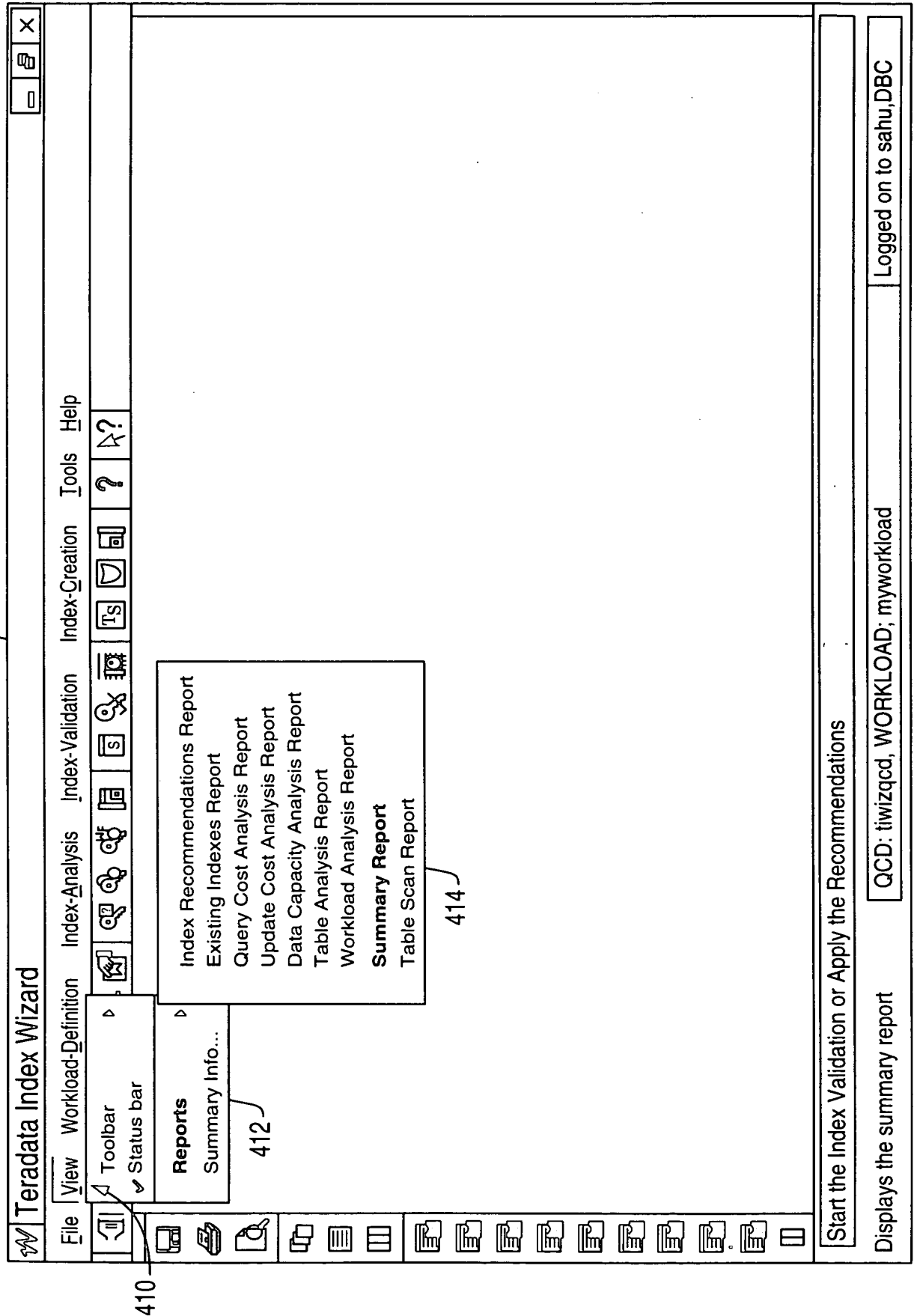
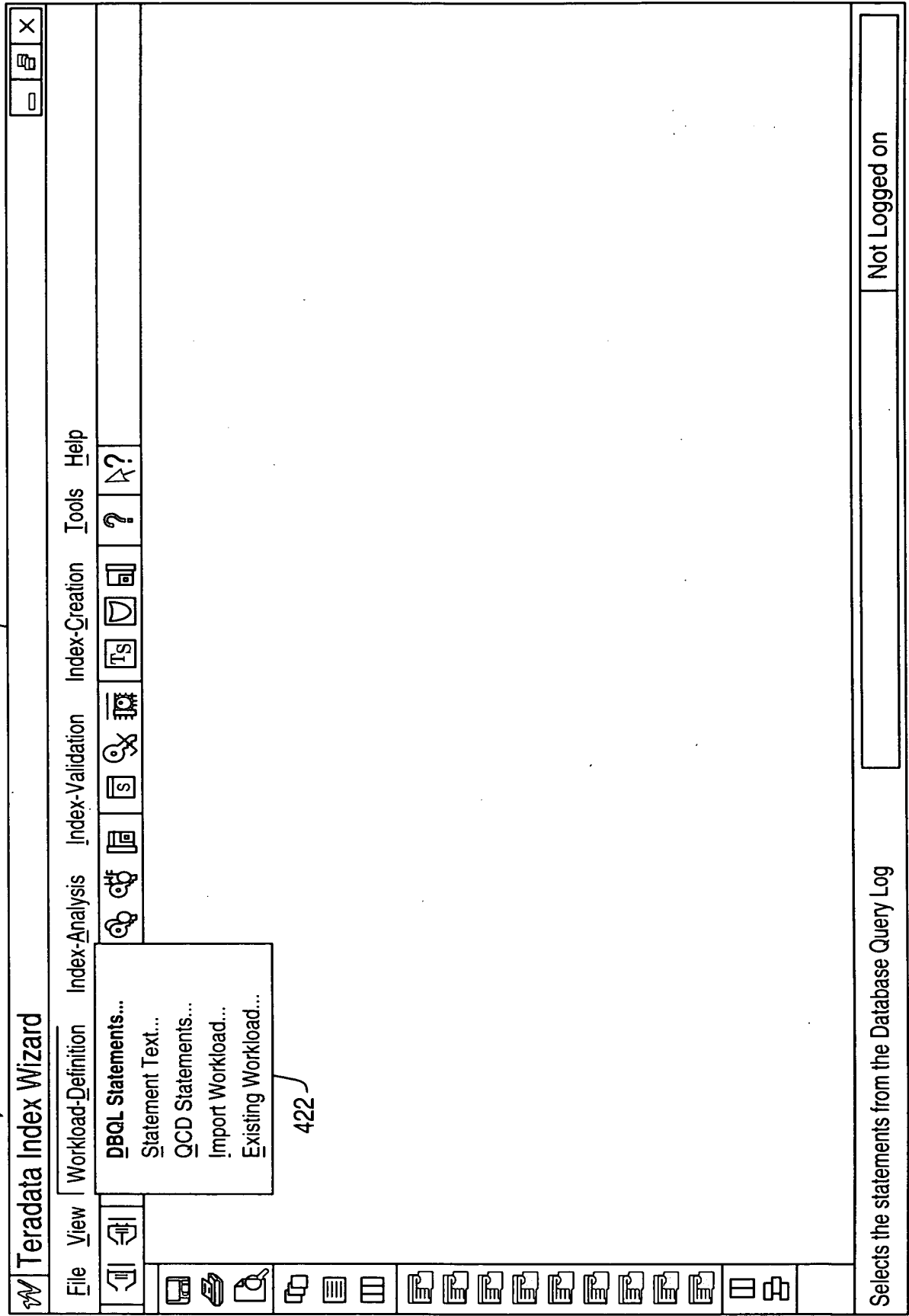


FIG. 15

420

400



422

FIG. 16

430 400

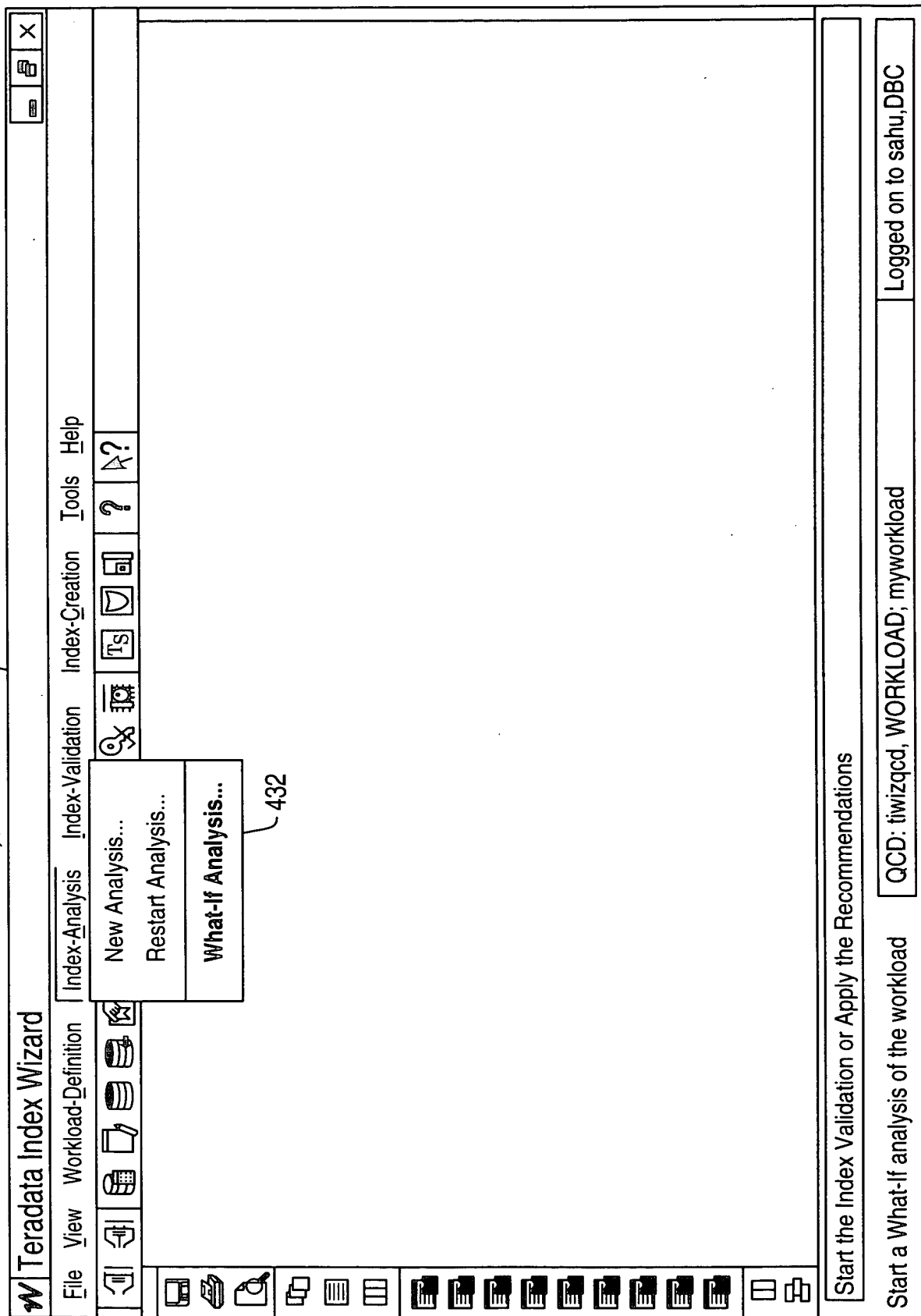
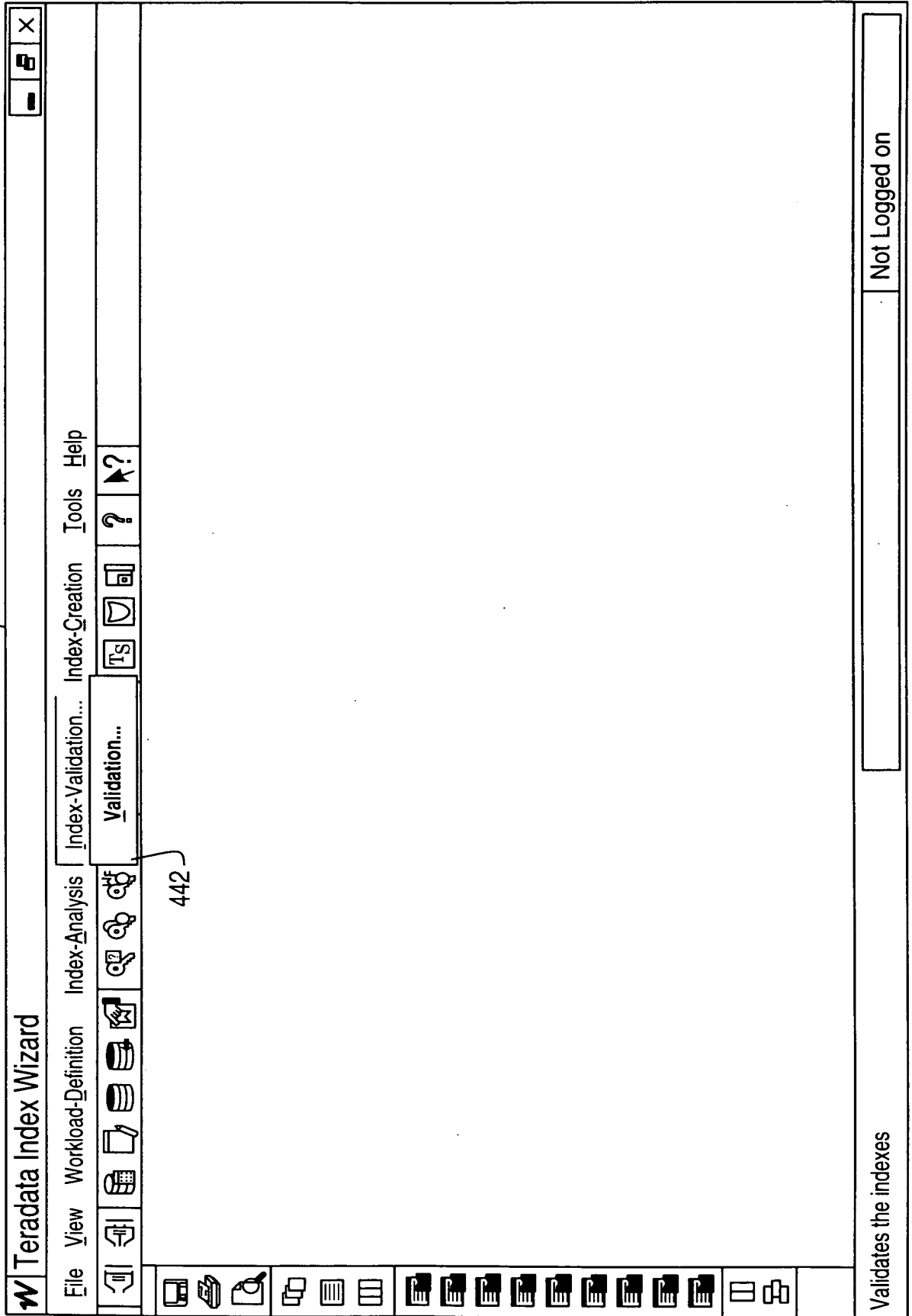


FIG. 17

440



442

450

FIG. 18

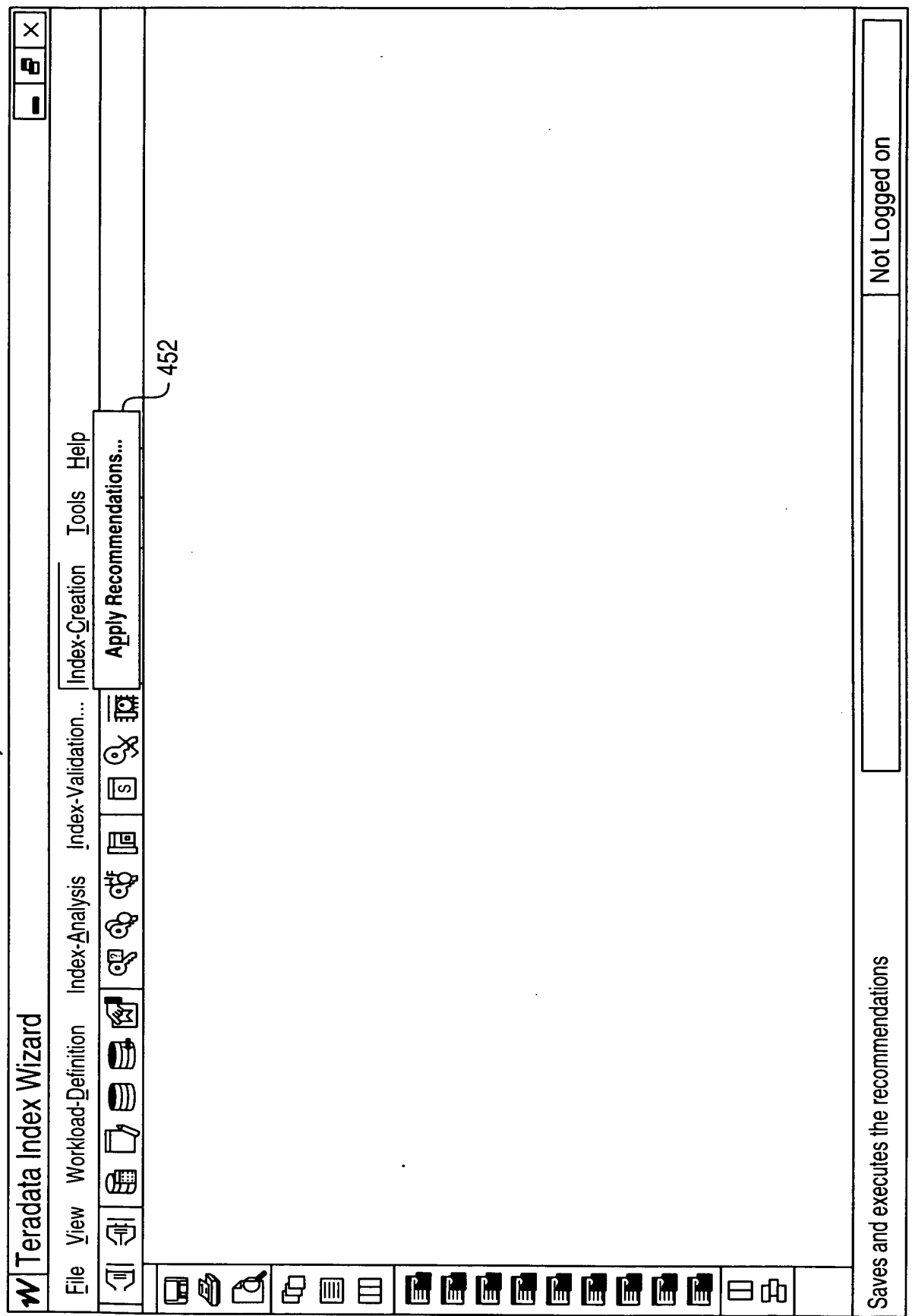
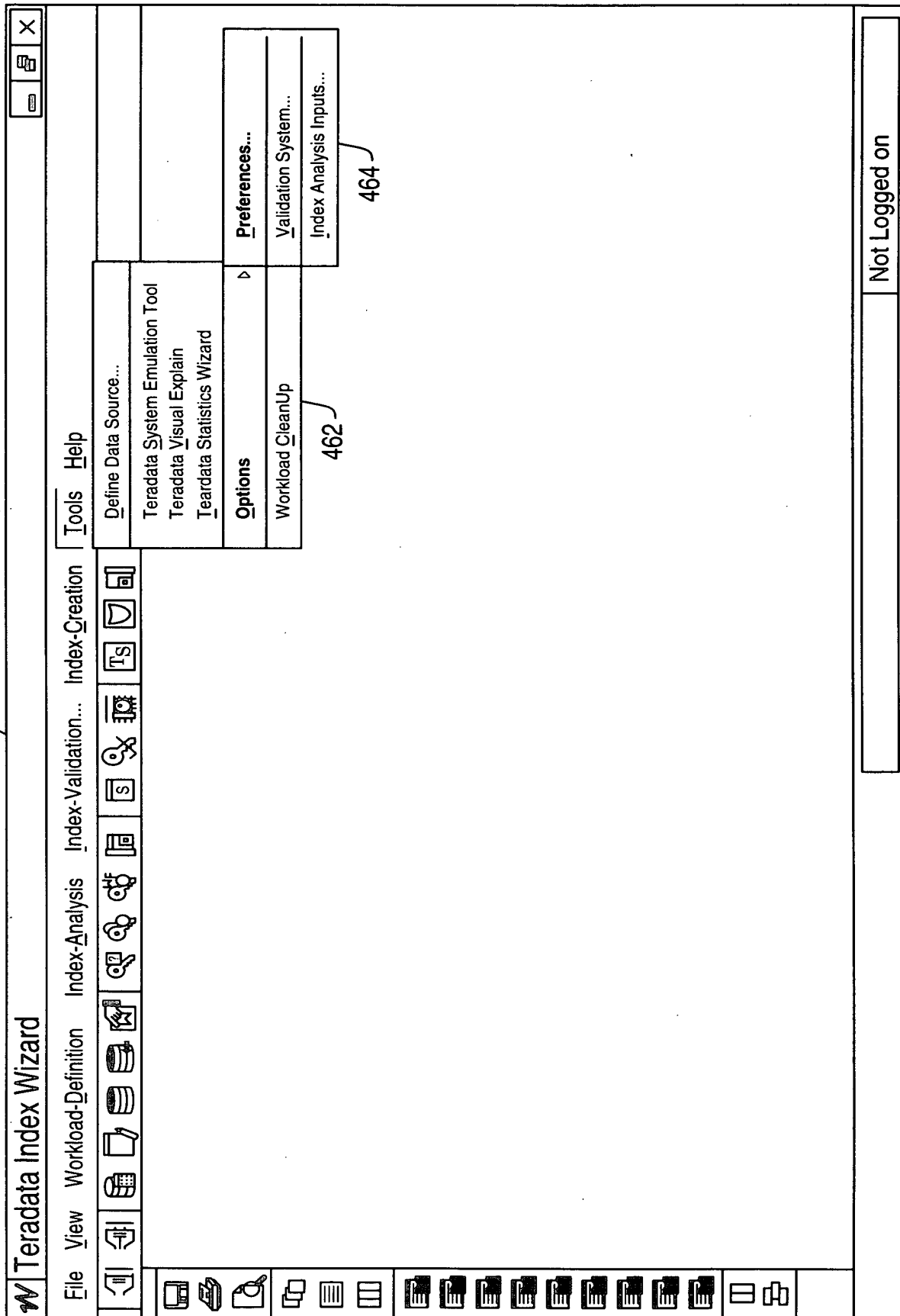


FIG. 19

460

400



















462

464

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FIG. 20

	ICON	DESCRIPTION
800		TO LOGON TO THE TERADATA RDBMS SERVER
801		TO LOG OFF FROM THE TERADATA RDBMS SERVER
802		TO SELECT THE STATEMENTS FROM THE DBQL
803		TO ENTER THE SQL STATEMENTS OR SELECT THEM FROM MORE THAN ONE FILE
804		TO SELECT THE SQL STATEMENTS FROM THE QCD
805		TO IMPORT A WORKLOAD FROM A PRODUCTION SYSTEM
806		TO SELECT AN EXISTING WORKLOAD
807		TO SET/RESET THE INDEX ANALYSIS PARAMETERS
808		TO START INDEX ANALYSIS
809		<u>TO PERFORM "WHAT-IF" ANALYSIS</u>
810		<u>TO RESTART INDEX ANALYSIS FROM A CHECKPOINT</u>
811		TO DISPLAY SUMMARY INFORMATION
812		TO VALIDATE THE INDEXES
813		TO SCHEDULE THE CREATION OF INDEXES
814		TO VIEW THE HELP CONTENTS
815		TO GUIDE THE USER HOW TO USE HELP

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FIG. 21

500

Define Workload [?] [X]

DBQL Search Criteria

User Name: Account Name:
Start Time: End Time:
Row Count: I/O Count: Frequency:
Statement Text:

503
Browse DBQL

DBQL Statements

502

Selected	Frequency	Statement Text

◀ ▶

Workload Name:

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FIG. 22

510

Define Workload

?

X

SQL Statements

sel * from dbc.dbcinfotbl;

▲

▼

◀

▶

Frequency:

1

512

Add

Browse

513

Selected Statements

Workload Name:

MyWorkload

514

Frequency	Statement Text
1	sel * from dbc.dbcinfotbl;

◀

▶

Remove

OK

Cancel

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FIG. 23

520

Define Workload
? X

QCD Statements

QCD Name: Query Id: Query Tag: 524 522

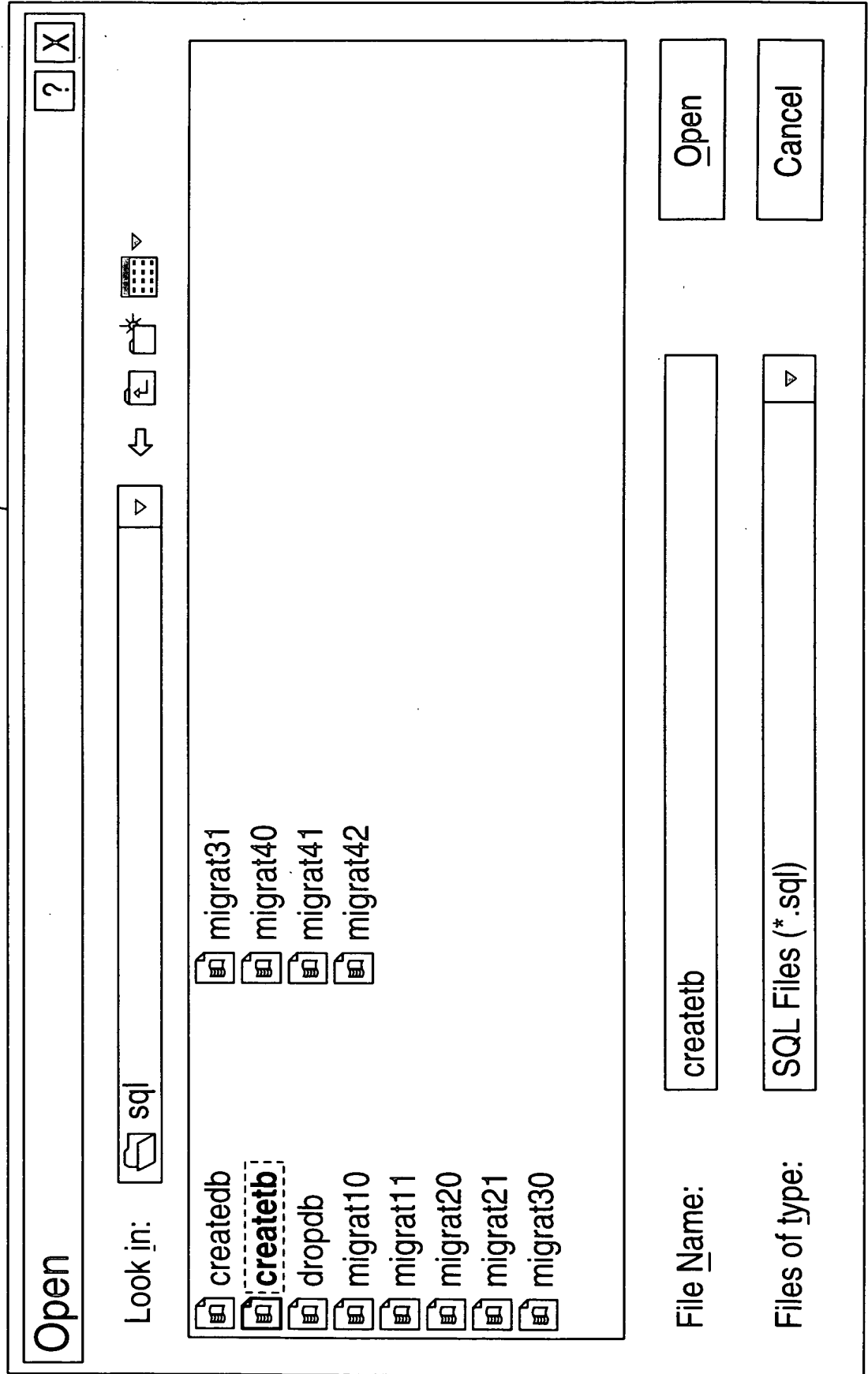
Selec	Query	Freque	Statement Text	△
<input checked="" type="checkbox"/>	19	1	Insert explain into tiwizqcd sel * from query,rela	
<input checked="" type="checkbox"/>	17	1	Insert explain into tiwizqcd sel * from query;;;	
<input type="checkbox"/>	15	1	sel * from query,relation where query.queryid =	
<input checked="" type="checkbox"/>	13	1	sel * from query,relation ,workload;;;	
<input type="checkbox"/>	32	1	sel * from query,relation where relation.relation	
<input checked="" type="checkbox"/>	11	1	sel * from query,relation where query.queryid =	
<input checked="" type="checkbox"/>	9	1	sel * from query,relation ,workload where quer	
<input type="checkbox"/>	30	1	sel * from query;;;	
<input type="checkbox"/>	28	1	Insert explain into TIWizQCD sel * from relatio	▽

<
>

Workload Name:

FIG. 24

530



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FIG. 25

540

Define Workload ? X

Select SQL Statements

542

Selected	Frequency	Statement Text
<input checked="" type="checkbox"/>	1	SELECT DISTINCT t_2.t_2_c_2- t_
<input type="checkbox"/>	1	SELECT NULLIF (t_4.t_4_c_3
<input checked="" type="checkbox"/>	1	DELETE FROM t_4 WHERE NO
<input checked="" type="checkbox"/>	1	DELETE t_1 WHERE NULLIF (t_1
<input type="checkbox"/>	1	INSERT INTO t_2 (t_2.t_2_c_1, t_2.
<input checked="" type="checkbox"/>	1	UPDATE t_1 FROM t_5, t_2, t_3 SET

< >

Workload Name:

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FIG. 26

550

Existing Workload

? X

Workload Statements

QCD Name:

TIWizQCD

...

Workload Name:

MyWorkload

▼

State	Freque	Statement Text	▲
1	1	sel * from query;;	
2	1	sel * from relation;;	▼
◀			▶

Workload Status

Recommend	Index Tag	Validate Sy	Validate Ti	Validate Q	Recom	▲
2	myindextag	deepika	7:43.670000	tiwizqcd	NONE	
1	MyIndexT ac	deepika	7:43.670000	tiwizqcd	NONE	
2	myindextag	deepika	7:43.670000	tiwizqcd	NONE	▼
◀						▶

Modify Options

☐ Qcd Statements
☐ Query Text

Modify

OK

Cancel

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FIG. 27

Existing Workload

?

X

Workload Statements

QCD Name:

TIWizQCD

...

Workload Name:

MyWorkload

▼

Selec	State	Frequ	Statement Text
<input checked="" type="checkbox"/>	1	1	sel * from query;;
<input type="checkbox"/>	2	1	sel * from relation;;
			◀ ▶

Workload Status

Recommend	Index Tag	Validate Sy	Validate Ti	Validate Q	Recom
2	myindextag	deepika	7:43.670000	tiwizqcd	NONE
1	MyIndexT ac	deepika	7:43.670000	tiwizqcd	NONE
2	myindextag	deepika	7:43.670000	tiwizqcd	NONE
					◀ ▶

Modify Options

☐ Qcd Statements

☐ Query Text

New Workload Name:

559

Update

OK

Cancel

550A

552A

558

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FIG. 28

560

Index Analysis Parameters

Index Analysis Inputs

☒ Keep existing indexes

Maximum Columns per Index: 4

Maximum Indexes per Table: 16

Index Search Space: 256

Change Rate Threshold: 5

OK Set Defaults Cancel

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FIG. 29

570

Index Analysis
? X

Workload Statements 572

Statement Id	Frequency	Statement Text	△
3	1	sel * from query,relation where relation.relationid	
1	1	sel * from query;;	
2	1	sel * from relation;;	▽

<
>

Select Tables

Selected	Database Name	Table Name	Access
<input checked="" type="checkbox"/>	tiwizqcd	QUERY	3
<input checked="" type="checkbox"/>	tiwizqcd	RELATION	2

<
>

Select All

Deselect All

Restart Parameters

Index Tag: MyIndexTag Checkpoint Frequency:

Save Options

☐ Save Recommendations in Files
☐ Save Execution Plans in Files

OK

Cancel

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FIG. 30

580

Restart Index Analysis

Restart parameters

QCD Name: TIWizQCD

Workload Name: MyWorkload ▼

Index Tag: MyIndexTag ▼

Save option

☒ Save Recommendations

☐ Save execution plans

OK Cancel

What-If Analysis

?

X

Workload Details

QCD Name: tiwizqcd

Workload Name: MyWorkload

Index Tag: MyIndextag

View Recom...

View Report...

Analysis

DDL Text: CREATE INDEX index_5 (TableName) on Relation;

Add ->

Rem

Rem All

Selected DDL Statements:

Statement Text

COLLECT STATS Relation INDEX index_5

COLLECT STATS Relation INDEX index_5

COLLECT INDEX index_5 (TableName)

View Statement

Analyze

View Graph

Conclusion: An overall improvement of 31.34 in the performance of the system

OK

Compare...

Cancel

FIG. 31

FIG. 32

620

Index Recommendation Report

Index Recommendation Report

QCD Name: tiwizqcd
Workload Name: myworkload
Index Tag: myindextag

Table Name	Index Tag	Index T...	Size(KB)	Time Esti...	Index DDL	Stats DDL
QUERY	MyIndextag	USI	10.00	59.00	CREATE INDEX...	COLLECT STATS
RELATION	MyIndextag	USI	10.00	59.00	CREATE INDEX...	COLLECT STATS
RELATION	MyIndextag	USI	10.00	59.00	CREATE INDEX...	COLLECT STATS

622

FIG. 33

630

Existing Indexes Report

Existing Indexes Report

QCD Name: TIWizQCD Workload Name: myworkload Index Tag: MyIndexTag

Table Name	Index Name	Index Type	Columns
QUERY	PK_QueryID	P	QueryID
RELATION	PK_RelationKey	P	RelationKey

632

FIG. 34

640

Query Cost Analysis Report				
Query Cost Analysis Report				
QCD Name: TIWizQCD		Workload Name: myworkload	Index Tag: MyIndexTag	
Query Type	Cost(with existing i...	Cost(with recommended...	Percentage Cha...	Query Text...
SELECT	100.00	50.00	100.00	sel * from query,relation w
SELECT	100.00	50.00	100.00	sel * from query;;
SELECT	100.00	50.00	100.00	sel * from relation;;

642

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FIG. 35

650

W Update Cost Report

Update Cost Report

QCD Name: MyTextQCD Workload Name: MyWorkload Index Tag: Index1

Table Name	Indexes	Update Cost
No rows returned		

◀

▶

652

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099-660

662-

FIG. 37

670

Table Usage Report		
<div> <div>QCD Name: TIWizQCD</div> <div>Table Usage Report</div> <div>Workload Name: myworkload</div> <div>Index Tag: MyIndexTag</div> </div>		
Table Name	Access Count	Statement Text
QUERY	1	sel * from query,relation where relation.relationid = query.queryid and query.qu
RELATION	1	sel * from query,relation where relation.relationid = query.queryid and query.qu
QUERY	1	sel * from query;;
RELATION	1	sel * from relation;;

672

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FIG. 38

680

Workload Analysis Report

QCD Name: TIWizQCD

Workload Name: myworkload

Index Tag: MyIndexTag

State...	Cost	Relative...	Table Na...	Columns	Columns involve...	Statement T
SELE...	10...	3.70	RELATION	RelationKey, Cardinality, Geogl...	?	sel * from q
SELE...	10...	3.70	QUERY	QueryText, QUERYNAME, Que	QueryID, QUER...	sel * from q
SELE...	10...	3.70	QUERY	UDB_KEY, QUERYNAME, Dat...	?	sel * from q
SELE...	10...	3.70	RELATION	SortInfo, VIEWNAME, UDB_KEY...	?	sel * from q

682

FIG. 39

690

Summary Report

Summary Report

QCD Name: TIWizQCD

Workload Name: myworkload

Index Tag: MyIndexTag

Table Name	Index Name	Index DDL	Stats DDL
QUERY	MyIndextag	CREATE INDEX index_3 (QueryText) on Query;	COLLECT STATS Query IND
RELATION	MyIndextag	CREATE INDEX index_4 (name) on Relation;	COLLECT STATS Relation I
RELATION	MyIndextag	CREATE INDEX index_4 (name,TableName) o...	COLLECT STATS Relation I

692

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-700

Table Scan Report					
Table Scan Report					
QCD Name: tiwizqcd		Workload Name: myworkload			
Owner	Table Name	Cardinality	AMPs Retrieves...	Geograph...	Statement Text
tiwizqcd	QUERY	45.00	All AMP Retrieve	built locally	sel * from query,relation where query.que
tiwizqcd	QUERY	45.00	All AMP Retrieve	built locally	sel * from query,relation,workload where
tiwizqcd	QUERY	45.00	All AMP Retrieve	built locally	sel * from query,relation,workload;;
tiwizqcd	RELATION	282.00	All AMP Retrieve	built locally	sel * from query,relation where query.que
tiwizqcd	RELATION	282.00	All AMP Retrieve	built locally	sel * from query,relation,workload where
tiwizqcd	RELATION	282.00	All AMP Retrieve	built locally	sel * from query,relation,workload;;
tiwizqcd	WORKLOAD	2.00	Single AMP Retr...	built locally	sel * from query,relation,workload where
tiwizqcd	WORKLOAD	2.00	All AMP Retrieve	built locally	sel * from query,relation,workload;;

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FIG. 41

710

? X

Workload Clean Up

Workload Statements

QCD Name: TIWizQCD ...

Workload Name: MyWorkload ▼

State	Frequ	Statement Text	△
1	1	sel * from query;;	
2	1	sel * from relation;;	▼
◀			▶

Workload Status

Select	Recommend	Index Tag	Validate Sy	Validate Ti	Validate Q	△
<input checked="" type="checkbox"/>	2	myindextag	deepika	7:43.670000	tiwizqcd	
<input checked="" type="checkbox"/>	1	MyIndexT ac	deepika	7:43.670000	tiwizqcd	
<input checked="" type="checkbox"/>	2	myindextag	deepika	7:43.670000	tiwizqcd	▼
◀						▶

Delete Options

☐ Delete Workload

☐ Delete Plans

☒ Delete Analysis

Delete

OK

Cancel

FIG. 42

730

Load Recommendations ? X

☒ Load Recommendations from QCD

☐ Load Recommendations from file

TIWizQCD,MyWorkload 732 Browse...

734 OK Cancel

FIG. 43

740

Load Recommendations Details ? X

QCD Name: TIWizQCD

Workload Name: MyWorkload ▼

Index Tag: myindextag ▼

742 OK Cancel

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FIG. 44

750

Index Validation

Validate Indexes

Select indexes to be validated: 752 ☒ Validate on another system

Sele	Table	Index	Index	Columns	Index DDL	
<input checked="" type="checkbox"/>	QUER	MyInd		Query Text	CREATE INDEX index_3 (Query T	▲
<input checked="" type="checkbox"/>	RELA	MyInd		name	CREATE INDEX index_4 (name) o	
<input checked="" type="checkbox"/>	RELA	MyInd		TableName	CREATE INDEX index_4 (name T	▼

◀ ▶

Select All
Deselect All
View DDL...
Validate

754 756

Validation Results

758

Table Name	Index Name	% Sample on which statistics were collected	
QUERY		10	
RELATION		10	
RELATION		10	▼

◀ ▶

Conclusion: An overall improvement of 38.24 in the performance of the system

Compare Options: Compare on same system ▼ View Graph

760

OK
Compare...
Cancel

762

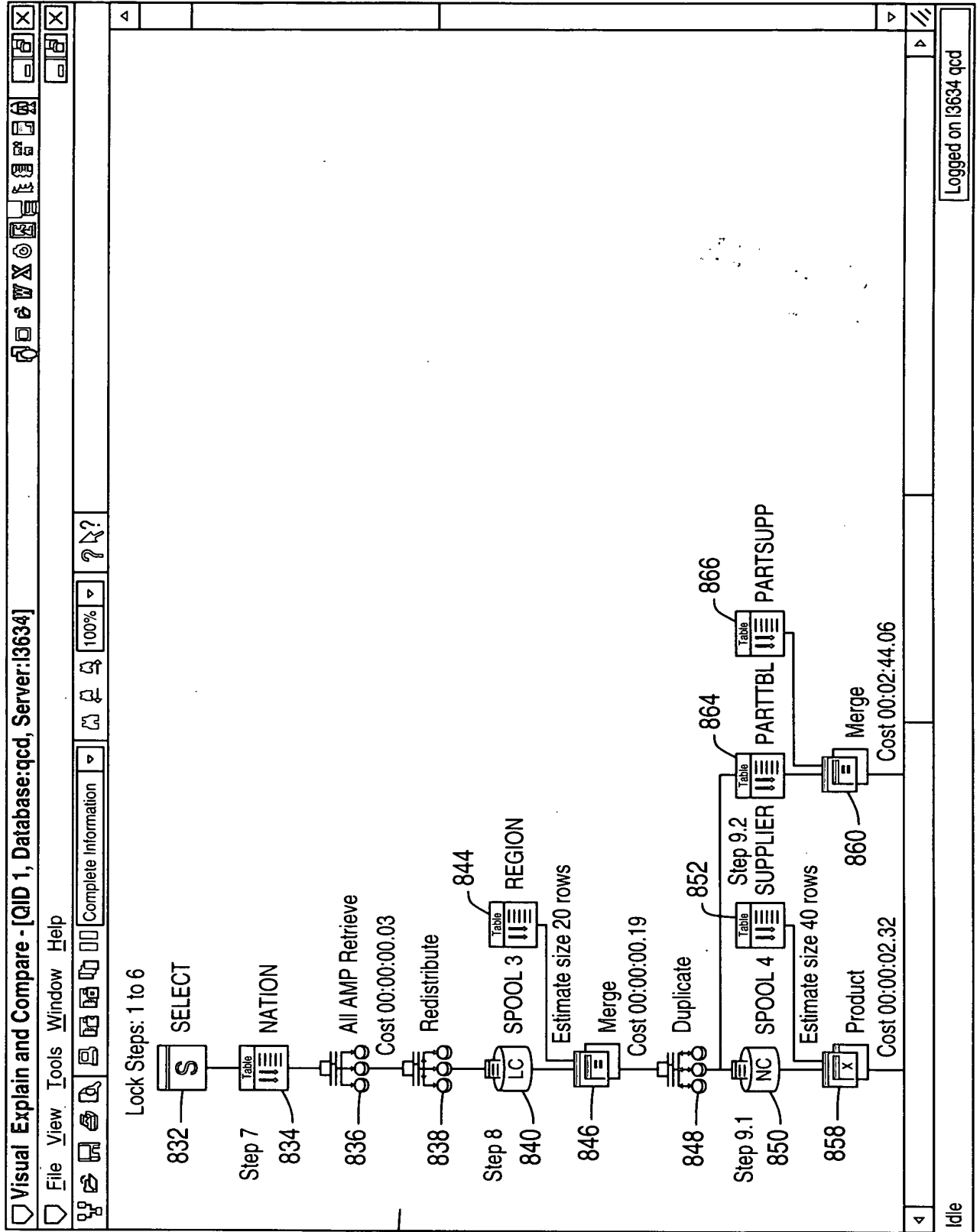


FIG. 45

830

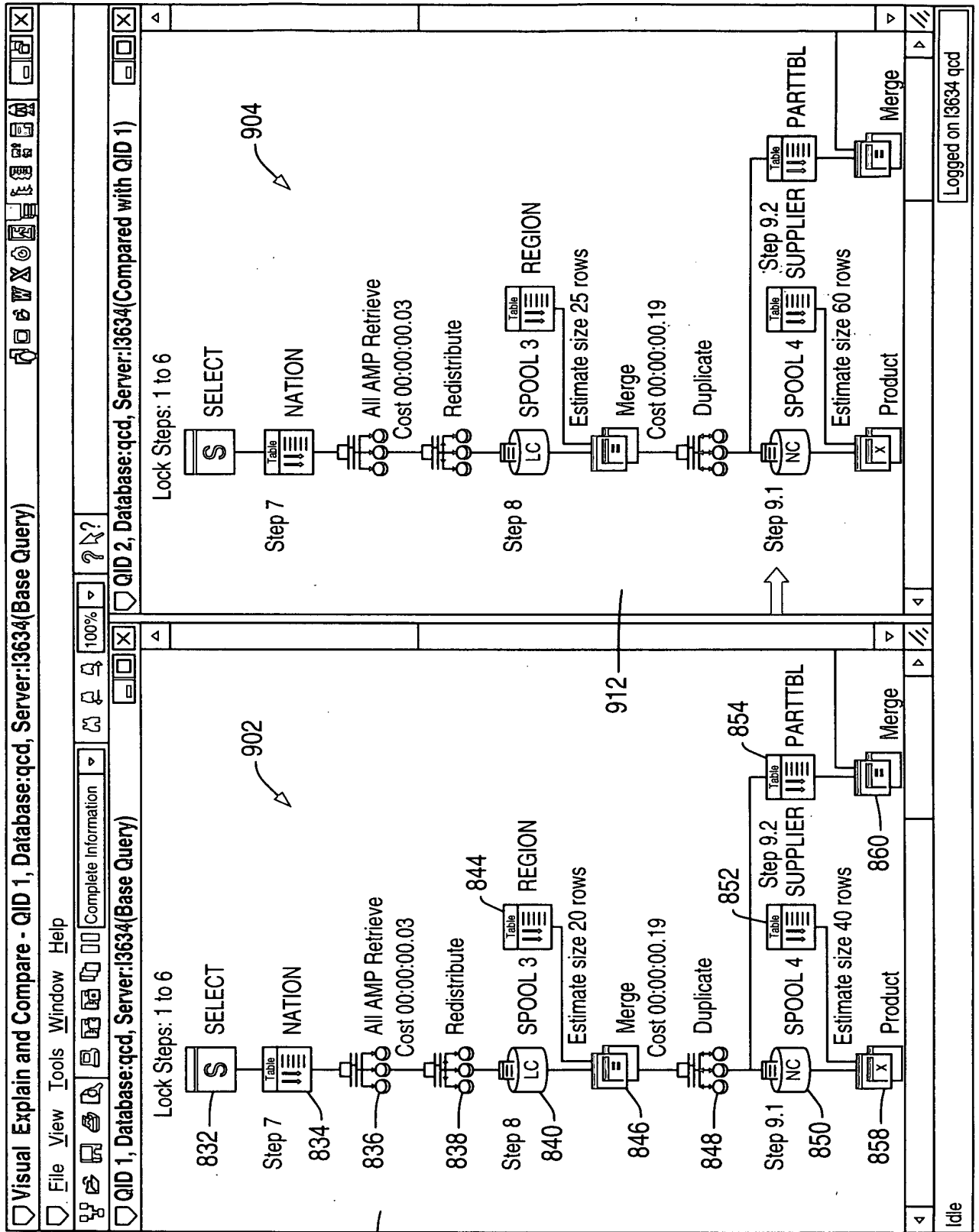


FIG. 46

Teradata Index Wizard

File View Workload Index-Analysis Index-Validation Index-Creation Tools Help

File Edit View Workload Index-Analysis Index-Validation Index-Creation Tools Help

Bar

Set Statistics Sample Size

Workload Definition Validation

Up to 1,000 rows: 50

1,000 to 10,000 rows: 30

10,000 to 100,000 rows: 20

100,000 to 1,000,000 rows: 10

1,000,000 to 10,000,000 rows: 5

10,000,000 to 100,000,000 rows: 1

Above 100,000,000 rows: 0.1

Set Defaults

OK Cancel Apply

Define the workload or select the what-if analysis or start the index validation

Idle QCD: TIWIZQCD Logged on to dpbv0, dbc 2:43 PM

Start Stop Refresh Undo Redo Print Help

FIG. 47

950